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Jan Kregel

Financial Markets Reform

BACKGROUND CONSIDERATIONS TO A RE-REGULATION OF THE U.S. FINANCIAL SYSTEM: THIRD TIME A CHARM? OR STRIKE THREE?

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Introduction

In the aftermath of the subprime mortgage crisis, the Federal Reserve converted section 13, paragraph c of the March 21, 1933 Amendment to the Glass-Steagall Act[1] into a permanent feature of its lender of last resort function through the discounting of the mortgage assets of investment banks and other capital market institutions such as primary and broker dealers. This has brought forth suggestions that the same prudential regulations that are applied to deposit takers be extended to investment banks and broker/dealers, while leaving the 1999 Gramm-Bliley-Leach Financial Services Modernization Act unchanged. The former U.S. Treasury Secretary, Henry Paulson, had also recommended consolidation and extension of the writ of certain regulatory agencies. However, the history of financial regulation in the United States suggests that this would simply be a repeat of the reactions, by legislators and regulators, to two previous financial crises, neither of which has proved durable or capable of providing financial stability.

Prudential Regulation: From Preserving the Value of Bank Notes to Deposits[2]

Prudential regulation in the United States initially concentrated on ensuring the redemption value of private bankers' circulating promissory notes. The failure to reconfirm the second Bank of the United States as the national bank of the United States in 1832, and the introduction of the Independent Treasury System based on payments by the Federal government in gold, relinquished the means of payment function to private sector financial institutions that could only be created under State charter and regulation.

This ushered in the period of free banking which lasted from the final demise of the Second Bank of the United States in 1836 to the issue of the first Federal circulating medium—the now famous “Greenback”—issued by the Union government to provide finance for the Civil War. When this limited issue proved insufficient for its war financing needs, the Union government introduced in 1863 the National Banking System, and created the Office of the Comptroller of the Currency to supervise the issue of national bank notes by the federally chartered National banks.

In the free banking period between 1836 and 1863, the means of payment was comprised of private bankers’ notes, in general backed by reserve holdings of the relevant state government securities or by specie. The new National system required reserve holding of Federal government debt for the issue of national bank notes by nationally chartered banks. However, the market value of these securities varied with changes in interest rates and other factors, which meant that the actual coverage represented by reserves held against national bank notes varied pro-cyclically because the securities were usually valued at par in both systems.

In order to ensure dominance of national notes, a tax was placed on State bank notes. To defend their position, State chartered private banks replaced their note issue with deposits subject to check. This extended the need for prudential regulation to bank deposits as well as national bank notes. Since the deposit banks were State banks, they were regulated by State governments. This created an initial dichotomy in U.S. bank regulation, with the State regulators, responsible for prudential regulation of deposit taking by State banks and the OCC for National banks, issuing National bank notes.

Preventing the Money Trust from Using Other Peoples (deposit) Money

The financial system in the United States before the creation of the Federal Reserve, according to Louis Brandeis, was one in which "the four distinct functions of banks (commercial banking, trust and insurance, corporate underwriting, and brokering) each essential to business, and each exercised originally, by a distinct set of men, became united in the investment banker" (Brandeis, 1914, pp. 5-6).

He noted that such a system would not be conducive to competition: "Can there be real bargaining where the same man is on both sides of the trade? The investment banker, through his controlling influence on the Board of Directors, decides that the corporation shall issue and sell securities, decides the price at which it shall sell them, and decides that it shall sell the securities to himself" (Brandeis, 1914, p.11). He also noted that the large profits that resulted from concentration "led to a revolutionary change in the conduct of our leading banking institutions," in which banks sought to become investment bankers, leading to their "departure from the legitimate sphere of the banking business, which is the making of temporary loans to business concerns" (Brandeis, 1914, p. 26). However, the main criticism was that the control of bank deposits—other people's money—was the source of this power of concentration and of the exorbitant profits of investment banks.

Brandeis' observation concerning the move in the early 1900s to concentration of banking activities in large multi-function investment banks must be seen in the context of the fact that National banks had initially been allowed to engage fully in capital market activities. However, after a challenge by the Comptroller of the right of the large New

York banks to operate in securities, by 1908 National banks were regulated to only commercial banking activities. National banks thus faced an increasing competitive disadvantage relative to State chartered banks who were usually allowed to operate without restriction in securities markets. To protect their profitability, National bankers created State chartered security affiliates that were outside the writ of the Comptroller. The first such affiliate was formed under State charter by First National City Bank in 1911.

The Reserve System, Real Bills and Blue Sky Laws Provide de facto Separation of Commercial and Investment Banks

The regulatory response to the federal investigations of the "money trust" produced central bank and securities regulations by state governments in the form of "blue sky" laws. The existence of legal limitations on the maximum issue of greenbacks, and subsequently of national bank notes, meant that the supply of currency was limited, independently of the needs of trade, and there was no means of increasing the supply of notes to meet the frequent loss of confidence in deposits of State banks. In 1875, the limitation on the note issue was eliminated, but this still did not provide a sufficiently elastic supply of currency. This, together with popular reaction against the money trust, led to the creation of the Federal Reserve System, composed of 12 District Federal Reserve Banks that could issue Federal Reserve Notes. These notes had to be backed 40 percent in gold and 60 percent in discounts on private commercial loans.

The elasticity of the note issue was thus resolved by adopting the real bills doctrine, which restored the role of the bank—as a deposit taker and lender of short-term funds for commercial purposes—as the central institution in the system. This finally made the note issue unique and unified, but retained the diverse quality of deposits issued by individual State and National banks. As a result, the main task of prudential supervision was to insure the maintenance of convertibility of private bank deposits into Federal Reserve Bank notes.

Restoring Profitability Leads Commercial Banks to Investment Activities

It was the 1927 Pepper-McFadden Act that finally clarified the range of activities permitted to National banks. In this period, as in the days of the money trust, National banks that were limited to commercial banking activities suffered from falling profitability. The continued expansion of free banking in many states led to widespread overbanking. At the same time, the 1920s stock market boom brought with it the possibility of National banks' commercial clients funding their short-term financing needs through longer-term capital market issues.

Even before the 1929 stock market crash, analysts were predicting the demise of the commercial banks as bank loans extended by National banks continued to decline. Lauchlin Currie, an adviser to the Federal Reserve and the Treasury in the 1930s (Currie, 1931, pp. 701-2), notes that over the period 1922-28 there was a tendency for larger, successful firms to reduce their bank borrowing, due to "a realization of the dangers inherent in loans of any description and particularly bank loans" (Currie, 1931, p. 708).

Whether Currie was right in identifying the cause of the decline in business lending or whether it was simply the fact that firms were encouraged by the banks directing them to their securities affiliates—since the stock market boom made it much cheaper to raise funds as the Fed was putting pressure on interest rates—, the end result was a decline in the quality and liquidity of "commercial" bank assets.

The solution to the commercial banks' dire need for additional sources of revenue was provided by the McFadden Act, which allowed National banks to "buy and sell without recourse marketable obligations in the form of bonds, notes or debentures, commonly known as investment securities.... This did not include the power to buy and sell stocks" (Valentine, 1951, p. 400).

Despite the expansion in activities that the Act provided, national banks went further and side-stepped national regulation of their activities by organizing independent securities affiliates with state charters. "Generally speaking it may be said that by 1929 in the field of long-term financing the commercial banks and their affiliates occupied a position comparable to that of private investment bankers from the standpoint of physical facilities, capital employed, and the volume of securities underwritten and distributed" (Valentine, 1951, p. 401). While, the money trust was not reconstructed, the combination of functions in a single institution, deplored by Brandeis, had been reconstituted.

New Deal Legislation Provides *de jure* Separation of Commercial and Investment Banks and seeks to Support Commercial Bank Profitability

After the 1929 stock market collapse, conditions facing commercial banks deteriorated rapidly. Currie was led to the conclusion that commercial banks "belong to a past era."

He supported this position by pointing out that banking statistics for December 31, 1932 indicated that 65 percent of banks' lending was against security and bonds, and only 8 percent could be considered as commercial loans. He "sought to explain the decline in bank loans as due to a recognition of the extent to which loans intensify the dangers of a drastic decline in net earnings and of insolvency should gross earnings decline" (Currie, 1934, p. 41).

Currie concludes, "If economic progress continues to be associated with the increasing importance of larger corporations having access to the stock and bond markets, there is a strong probability that the commercial loan will continue to decline in the future. The decline in the commercial loan, in other words, appears to be intimately related to the changing structure of business which is bringing about a change in the methods of financing of business" (Currie, 1934 p. 41). He suggests that banks will be left with savings deposits as a source of funding individual lending, while other institutions should be expected to emerge to meet any lending demand beyond the ability of these banks (Currie, 1934, p. 152).

However, the Bank holiday in 1933 and the depression produced a stronger regulatory response in the form of the 1933 Glass-Steagall Act. While the major objective of the Act may be seen as the prudential regulation of banks to ensure the value of public deposits in terms of Federal Reserve notes, it did this by restoring the separation of commercial and investment banking, limiting the activities of deposit-taking commercial banks to short-term commercial lending. It thus followed Brandeis' recommendation of establishing a direct correspondence between the definition of a regulated institution and its function in providing deposits, excluding investment banks from this activity.

The legislation clearly recognized that, just as in the era of the money trust, the difficulties had been caused by the declining profitability of commercial banks. Thus, effective regulation had to be compatible with a restoration of the profitability of commercial banks. Indeed, the Federal Advisory Council had indicated that the return to the “real bills” doctrine in commercial banking would require the sale of bank portfolios, and thus reduce earnings and create a further downward pressure on asset prices in already depressed conditions.

At the time of the new regulations, roughly half of national bank earnings were generated by capital market activities. It sought to substitute for these now forbidden sources of earnings, by providing a monopoly on deposits and limiting over-banking through the FDIC deposit insurance, and limiting the costs of deposit funds through Regulation Q (the prohibition against payment interest on demand deposits). It would thus seem that it was clear in the minds of the authors of the Emergency Banking Act that prudential regulation had to be framed so as to ensure the profitability of the financial institutions. These concerns substituted the role of bank reserves as the major prudential policy tool.

…And Made Blue Sky Laws National

The second objective of the New Deal legislation was to protect individuals from the fraud and malfeasance that had been identified with the activities of the state regulated securities affiliates of National banks. The regulation of the activities of firms in capital markets thus followed a similar logic to the Banking Act. Under the New Deal securities laws, all other financial firms, such as investment banks and securities firms, were defined as firms engaged in those activities that are excluded from commercial banks—i.e. securities. Indeed, these investment banks were included in Glass-Steagall 1933 only as an afterthought, because, although their primary activities were as underwriters and capital market intermediaries, they used little capital. However, they did hold substantial amounts of corporate client money on deposit, largely from the proceeds of underwriting for large commercial clients, rather than the general public. Thus, legislative consistency required that they should be treated just as other deposit takers. But, this would have prevented them from operating their core business of underwriting and intermediation. Many investment banks thus chose to cease taking deposits, limiting the financing of their activities to borrowing in private capital markets or using partner's capital.

In contrast to commercial banks, regulation of these "excluded" financial institutions was undertaken in an entirely different way, through the creation of the U. S. Securities and Exchange Commission (SEC). Rather than being based on the definition of the type of institution, as in the 1933 Act, regulation of non-deposit takers followed the tradition of the blue sky laws. Regulatory authority was based on the assets dealt in by the financial institution: i.e., as being engaged in the business of effecting transactions in securities for the account of others, or engaged in the business of buying and selling securities for their own benefit. Regulatory authority was thus based on the definition of the product—the type of security, independently of the organization, or definition of the firm as a broker, or a dealer, underwriter or primary investor. All institutions undertaking such activities were classified by exclusion as investment banks. This is because the New Deal legislators were more concerned with protecting the individuals investing in securities than in regulating the activities of the firms that traded and sold securities. The major organizing principle of the SEC was thus “sunshine”—providing transparency, rather than providing prudential regulation through capital or loan-loss reserves.

… And a de facto identity between Institutional and Functional Regulation

Thus, the regulatory regime that emerged from the New Deal legislation was not based on a reasoned analysis of the advantages of product-based or function-based regulation versus institution-based regulation. Although it did create an identity between a functional regulatory authority based on financial products or services (deposit taking, real bills lending), and an institutional regulatory authority based on the definition of the institution (commercial banks versus investment banks and securities firms), this was primarily due to restored historical preference of regulators for “real bills” based banking.

As a result of the New Deal legislation, the U.S. emerged from the war with a dual (State-Federal bank charters and regulation), segmented (commercial and investment banks), unit banking (branching restrictions determined by State law) system. From the regulatory point of view, the situation was complicated by the existence of National banks, supervised by the Office of the Comptroller of the Currency, as distinct from state chartered banks, regulated by state banking commissions, and the regulations of the Federal Reserve, which depended on regulatory authority to ensure implementation of monetary policy.

The exceptional regulation of thrift institutions maintained this approach by creating a set of institutions with a specific function—the provision of home mortgage financing through the Federal Home Loan Bank and the Federal Housing Administration (FHA), and the government sponsored enterprises.

As a result of these historical preferences, there was no recognition of any need to make a distinction between functional and institutional regulation in the New Deal system, since they were identical. However, this identity quickly broke down as the protections given to commercial banks were subject to two sorts of competitive pressures: on the one hand, from the increasing use of prudential regulations for monetary policy purposes and, on the other, from other institutions that did not face similar prudential regulation. This happened as commercial banks lost deposits as thrifts, and brokerage houses competed for private household deposits, and Treasury bills became more attractive to businesses, for the purposes of management of liquidity, than regulated deposits.

This third repetition of a decline in the profitability of commercial banks did not mean that households and corporations were being deprived of the functions and services traditionally offered by commercial banks, simply that these same functions were being satisfied by other financial institutions, such as thrifts and commercial paper offered by investment banks, usually at a lower cost and with greater efficiency. Other examples include credit card companies, which provide a form of payments service; money market mutual funds, which offer a low-risk savings and transaction vehicle for businesses and consumers; and commercial paper which is a substitute (often a low-cost one) for commercial loans.

This intrusion into the activities of commercial banks and the negative impact on profitability eventually led to regulatory responses to restore the competitiveness of commercial banks by expanding the kinds of capital market services that they could offer. There were a number of important steps in this process, such as the move to eliminate Regulation Q interest rate controls and the creation of exemptions for one-bank holding companies. Since the decline in the profitability of commercial banks was linked to the one-sided nature of Glass-Steagall regulation, recovery in profitability was linked to reducing those regulations, usually without recognition that this meant that the identity between institution and function was being eliminated.

Bank holding companies could thus be created with affiliates that were able to offer consumer finance and mortgage services. Restrictions on branching and deposit interest rates were reduced or eliminated completely. However, since deregulation also increased competition, it obviously also led to a reduction in bank profits in some activities. Indeed, one of the original objectives of Regulation Q was to eliminate competition for deposits and to restrict the deposit activities of investment banks to protect commercial banks from competition for their core source of funding.

On the other hand, deregulation has given banks a freer hand to respond to non-bank competitors' attempted inroads into their markets. In some instances it was regulations that produced the opportunity for non-bank firms to profit from providing substitutes to the activities of commercial banks. Money market mutual funds are an example. By using the flexibility provided by the Bank Holding Company Act, by developing sophisticated liability management techniques, by major expansions abroad, and by creative and innovative adaptations of "conventional" banking services, banks have expanded into additional activities that have generated alternative sources of income.

Data reported by Gerald Corrigan (1982) show that the return on assets (ROA) for regulated banks increased until 1973, but then declined, even though it was substantially higher in 1981 than in 1956. The significance in the shift away from traditional commercial banking—represented by taking deposits and lending to commercial borrowers short-term, and producing income from the positive net interest—may be seen in the decline of this source of income relative to income from fees and commissions. Between 1956 and 1981, the fee income of insured commercial banks rose from 11.3 percent of operating income net of interest expense to 19.5 percent. This trend is also reflected in the rise in return on equity which reached a peak in 1981.

At the same time, there were changes in the environment facing investment banks, such as the 1975 May Day elimination of fixed brokerage commissions, and the introduction of shelf-registration that both plays a role in increasing competition among investment banks and in inducing them to seek alternative forms of income generating activity. An example was the bundling of deposit accounts, credit cards, and consumer lending along with brokerage accounts by retail brokers such as Merrill Lynch. Finally, the rise of financial engineering, and the rapid increase of computational power that produced the "unbundling" of the various characteristics of fixed income assets also played an important role in generating competition between investment and commercial banks.

In this period, official attempts to save the Savings and Loan Banks from competition from both commercial banks and investment banks brokers/dealers through measures to increase thifts' profitability, to allow them to "grow" out of the crisis produced by deregulation, bankrupted the whole industry and lay the ground for the origination and securitization of mortgages by investment banks.

Thus the 1980-90s saw a repetition of the two prior experiences of falling commercial bank profitability. As in the previous cases, it produced the same solution in the form of the 1999 Financial Modernization Act. The Act again restored the comingling of commercial and investment banking, as well as the two principles of bank regulation of financial functions, and resulted in the creation of areas without appropriate regulation, which were exposed to the subprime crisis of 2007. However, financial innovation has not only led to the comingling of commercial and investment banking, but also to a series of new capital market institutions. In particular, hedge funds and private equity funds have taken on both traditional investment banking functions as well as commercial banking functions, but without the regulation of either.

The result of this process is that, in contrast to Glass-Steagall, there is no longer any precise relation between financial institutions and functions. This implies that any attempt to re-regulate the U.S. financial system must start from a decision to either reimpose this identity between institutions and functions, or to shift to a system based on functional regulation. Thus, the first decision that has to be taken in the process of re-regulation is whether it should be based on institutions or on functions or products.

One of the major implications of the financial innovation that was produced by deregulation is the unbundling of risks in financial products. This has multiplied the number and kinds of products, and allowed the creation of new financial institutions without preserving the one on one correspondence between institutions and functions.

Transactions accounts are offered by brokers/dealers, following a principle first used by J.P. Morgan in keeping deposit accounts for the financial market activities of its clients. But while J.P. Morgan dealt with corporations, the extension of retail brokerage accounts has turned these into the equivalent of retail deposit accounts. So the question arises: should they be regulated as equivalent to deposits, or should they be part of the regulation of brokers/dealers? From this point of view, it would be a mistake to extend prudential regulations, which were originally designed to ensure the payments system based on private bank deposits, to financial institutions that do not provide those functions.

Regulating Deposits no Longer Controls Liquidity

The second implication of the breakdown of the identity between institutions and function that accompanied the process of financial innovation is that regulated banks no longer are the primary source of system liquidity, and thus are no longer the major transmission mechanism of monetary policy. The basic role of insured commercial banks in providing liquidity comes from their ability to issue insured deposits that are guaranteed to be equivalent in value to Federal Reserve notes. The liquidity of assets, and thus their value, is created by the willingness of banks to accept them as collateral against loans that take the form of the creation of a deposit. However, in the present system, the creation of liquidity comes primarily from the existence of organized derivative markets in which positions in assets can be acquired against the posting of margin that is only a small percentage of the position exposure, or in which assets can be underwritten and sold in capital markets. Thus a “margin” multiplier has replaced the “deposit” multiplier as the basic source of liquidity in the system.

Since it is now possible to have increasing liquidity without any direct impact on bank assets and liabilities, prudential regulation thus no longer has a direct impact on system liquidity. The traditional transmission mechanism for monetary policy has also been eliminated. This point has been made by Martin Mayer in his recent book on the Fed (Mayer, 2001). Any justification for applying prudential regulation to non-deposit taking banks thus cannot rest on defending the value of deposits, but on the control of liquidity and the effectiveness of monetary policy.

Don’t Shoot the Product

Any shift towards regulation of products or functions must carefully evaluate the products that are the sources of financial instability. For example, the junk bond crisis was not initially due to the existence of non-investment grade bonds. The existence of the distinction between investment grade and non-investment grade assets creates an imbalance in favor of the former, and against the latter. This would naturally lead to non-investment grade bonds having lower than equilibrium prices, and thus excess risk adjusted rates of return. Michael Milkin had simply sought to arbitrage the mispricing created by an arbitrary non-market distinction. His problems started when he began to manufacture non-investment grade securities.

A similar process was involved with subprime loans. The existence of a barrier between conforming and non-conforming loans that qualified for support from the government sponsored entities, created a similar excess return for subprime and Alt-A loans that financial institutions sought to arbitrage, just as Milkin had before. However, difficulties arose in both markets when assets started to be manufactured that could take advantage of the arbitrage—Milkin's creation of new, manufactured junk—and the origination of income statement subprime loans, which no longer carried the excess returns that had been the initial justification of the market.

Junk bonds and securitized mortgage lending had existed for years without creating difficulties. Thus, the subprime collapse should not be an excuse to eliminate asset securitization, or even mortgage securitization. Securitization was not the problem; the problem was in the process of creation of the assets that were securitized, and their distribution across the institutional investor base.

Product Regulation Seems More Promising

In the current context, it would seem that there is a clear benefit to pursuing product rather the institutional regulation. Nevertheless, one should also reflect on the objective of prudential regulation. If it is only to provide a secure payments system and a secure vehicle for private savings, the solution is simple. The government or the Federal Reserve can provide a secure payments system—indeed many countries once had such systems in the form of postal savings systems. This would satisfy the traditional objective of prudential regulation of providing a secure payment system. This is not really different from the traditional proposals for 100 percent reserve banking made by Hayek and others in Chicago in the 1930s, and renewed in the discussions over bank reform after the real estate crisis at the end of the 1980s. The implication is that this would leave the rest of the financial system largely unregulated for prudential purposes.

But there is an Alternative[3]

The United States is therefore facing its third try at deciding between a segmented or a unified banking system. Many European countries have had the latter for many years without the same experience of financial crisis. What have they done that is different? Germany provides a good example. Germany rejected a separation of commercial and investment banks after their 1930s banking crisis and maintained universal banking. In Germany, regulators operate a system in which the bank's balance sheet is effectively split into short-term commercial banking activities requiring maturity matching, and capital market activities requiring long-term maturity matching. This is equivalent to extending commercial bank regulation to investment banks, yet recognizing that the regulations must differ.

The German Bank Law, which rules today, is thus a direct descendant of the Law introduced in 1934. It is based on the indirect approach to the problem of bank stability and the protection of depositors via the "Principles Concerning the Capital Resources and Liquidity of Credit Institutions." The most basic of these is Principle II, the "liquidity principle," which limits long-term assets to long-term liabilities. Long-term funding is defined as the sum of the bank's own equity, the bank's sale of bonds, other long-term borrowing by the bank, 60 percent of savings deposits and 10 percent of current accounts, and time deposits held by non-financial entities.

In addition, Principle III limits the bank's portfolio of loans, advances, discounted bills, quoted shares, and liabilities of other credit institutions to a maximum of 60 percent of the sum of its current and time deposit liabilities to non-financial entities, 35 percent of its current and time deposit liabilities to financial entities, 20 percent of its savings deposit liabilities, 35 percent of its borrowing with a maturity from one month to four years, and 80 percent of the bank's issue of acceptances, notes, bills drawn on itself and international letters of credit.

Principle I sets capital adequacy rules which require a bank's capital (including reserves and retained earnings) to be a minimum of $1/18^{th}$ (a little over 5.5 percent) of total lending to firms and individuals, plus its book credits and non-controlling equity interests. Since the 1974 Herstatt Bank crisis (which was the result of fraudulent foreign exchange trading), there have been additional regulations limiting open foreign exchange positions to 30 percent of capital plus reserves and retained earnings.

Until the Herstatt crisis, Germany had no depositor insurance. In 1974, the Bundesbank set up the Liquidity-syndicate Bank, which accepts bills drawn by banks facing liquidity shortages and which can be discounted at the Bundesbank. In 1976, the banks themselves created a private "deposit insurance fund" which reimburses individual depositors for up to 30 percent of the bank's most recently published net worth statement. Membership of banks in both institutions is voluntary.

The basic framework has been extended to adapt to financial innovations. In 1990, Principle I was extended to include capital requirements to risk-adjusted off-balance sheet exposures for financial swaps, forward contracts and option rights. In addition, Principle Ia limits a bank's outstanding acceptances, promissory notes, and bills drawn on debtors to a maximum of 1.5 times its own capital, calculated and reported on a daily basis. In 1990, Principle Ia "was amended more substantially to limit all 'price risks,'—including in particular those arising from off-balance sheet financial instruments—to 60 [percent] of a bank's liable capital" (1990, p. 39). Within this 60 percent limit, there are individually binding class limits of 30 percent for foreign currency and precious metal risks, 20 percent for interest rate risks from interest rate forward contracts and options, and 10 percent of other forwards and options on shares and index-linked contracts. These limits were reduced to 21, 14 and 7 percent respectively, from January 1, 1993 onwards, when the Fourth Amendment to the Act introduced the new European Union Banking Directives.

In addition, new financial products have made it necessary for Principle I to be:

> extended to constitute a general counterparty risk principle going beyond mere credit risk. Principle Ia ... provide(s) a general set of rules aimed at containing ... the price risks involved in certain types of transactions which are particularly risk-prone because they require little or no capital input (leverage effect).

Furthermore, there are regulations on the size of loans: single loans cannot exceed 75 percent (reduced to 50 percent in 1985) of the bank's own capital; and all large loans cannot exceed eight times the loan capital. These large loans, defined as those which exceed 15 percent of bank capital, have to be reported without delay to the Bundesbank, and all loans above a certain minimum (which has been changed over time) also have to be reported. "The main duty of the recording center is to ascertain the overall indebtedness of borrowers who have obtained credits of or exceeding DM 1 million from two or more institutions, and to inform the lending institutions regarding the amount of their borrowers' total credit indebtedness and the number of lenders" (Bundesbank, 1962, p. 95). In addition, the Supervisory Agency may inspect banks' asset portfolios and make recommendations based on them.

During the discussions over the 1999 Financial Modernization Act, the German system was reviewed, but rejected in favor of the bank holding company model. Given the disappointing performance of that model, perhaps it is time to return to a discussion of universal banks—not as a banking model, but as a model for regulation.

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[1] The first Glass-Steagall Act of 1932 (not the better known second, or Emergency Banking Act), added paragraph 3 to Section 13 of the Federal Reserve Act, and opened the discount window to non-banks in unusual and exigent circumstances. The FDIC Improvement Act of 1991 amended the paragraph to allow the Fed to lend directly to non-bank firms in times of emergency. It is not clear why the Fed could not have lent directly to Bear Stearns, rather than indirectly through J.P. Morgan Chase.

[2] Material in this section and the following, draw on Kregel (1996, 1997).

[3] Material in this section draws on Kregel (1992, 1995).